dish NETWORK

Reverse Band

Reverse Band Plan

- Common FCC/EchoStar Goals:
  - Maximize use of available spectrum for U.S. providers;
  - Facilitate investment in satellites to bring new services to consumers;
  - Provide for viable consumer-friendly service and equipment;
  - Reduce potential interference between providers.

Reverse Band Plan

- The Reverse Band is an essential part of EchoStar's competitive future.
- Recent 4° spacing order presents serious barriers to EchoStar investment in this band.
- EchoStar is here to give new information regarding the technical difficulties of providing service under the new rules.

Competition

- This band presents opportunities for 30+ slots. There are many opportunities for new satellite entrants.
- As a practical matter, however, only four companies have expressed interest in this band over the past 10 years.
- The satellite business is capital intensive. So far, the market has not been able to sustain a third DBS provider.
- Key public interest benefit to the band is increased video competition with cable.

Video Market

- EchoStar entered the video market as a “new entrant” to compete with incumbent cable providers.
- We offer the lowest-cost service, a family friendly package, and a la carte programming.
- We are more spectrum challenged than our wireline and satellite competitors. This new spectrum is critical so that we can compete with dominant cable and telco providers.

Efficient Use of Reverse Band

- Launching a satellite in this band carries significant business risk given international complexities. Even so, EchoStar is willing to make the investment.
- We are so serious about using this band, that we filed the largest number of applications – 10 total.
- EchoStar is the only company that expressed interest in building satellites for the wing slots.
- But it only makes sense to invest in satellites if EchoStar can integrate them into its existing constellation.

Consumer Friendly Dish

- Consumers demand small and affordable dishes. The higher the power, the smaller the dish.
- OTARD dish size limitation (1 meter diameter). Any dish bigger than 1 meter is not commercially viable.
- Two Dish history – Chairman and Commissioners have been vocal opponents of forcing consumers to install a second dish on their homes.

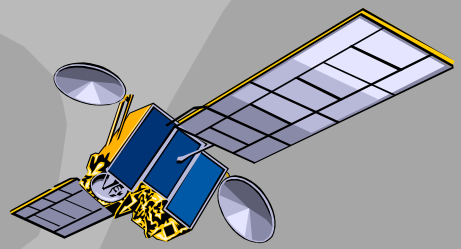
Current Order

- Four degree spacing creates significant barriers to investment.
- Service from orbital slots that are closer than 2° but more than 0.7° necessitate a second dish.
- Offsetting a satellite that requires drastic power reductions is not a realistic solution.
- Eliminates synergies for existing constellations.

Orbital Spacing

- To justify the investment, EchoStar needs to be able maximize the number of satellites seen with minimal feeds on a reasonable size dish.
  - Dual feeds are only possible if the orbital slots are within 0.5 of each other. Practical maximum is 0.7°. Need to account for DBS cluster size.
  - To fit two feeds on the same dish, the individual feeds must look at orbital slots that are at least 2° apart. Practical minimum is 1.8°
  - Thus, two feeds that are between 0.7° and 1.8° apart would need to be placed on separate dishes.

111° Offset



Reverse Band Orbital Locations

111° **107°**

2nd Dish | One Dish | 2nd Dish | One Dish

111.6 | 110.5 | 110.3 | 109.7 | 109.5 | 108.4 | 108.2

110°

DBS Operations Today

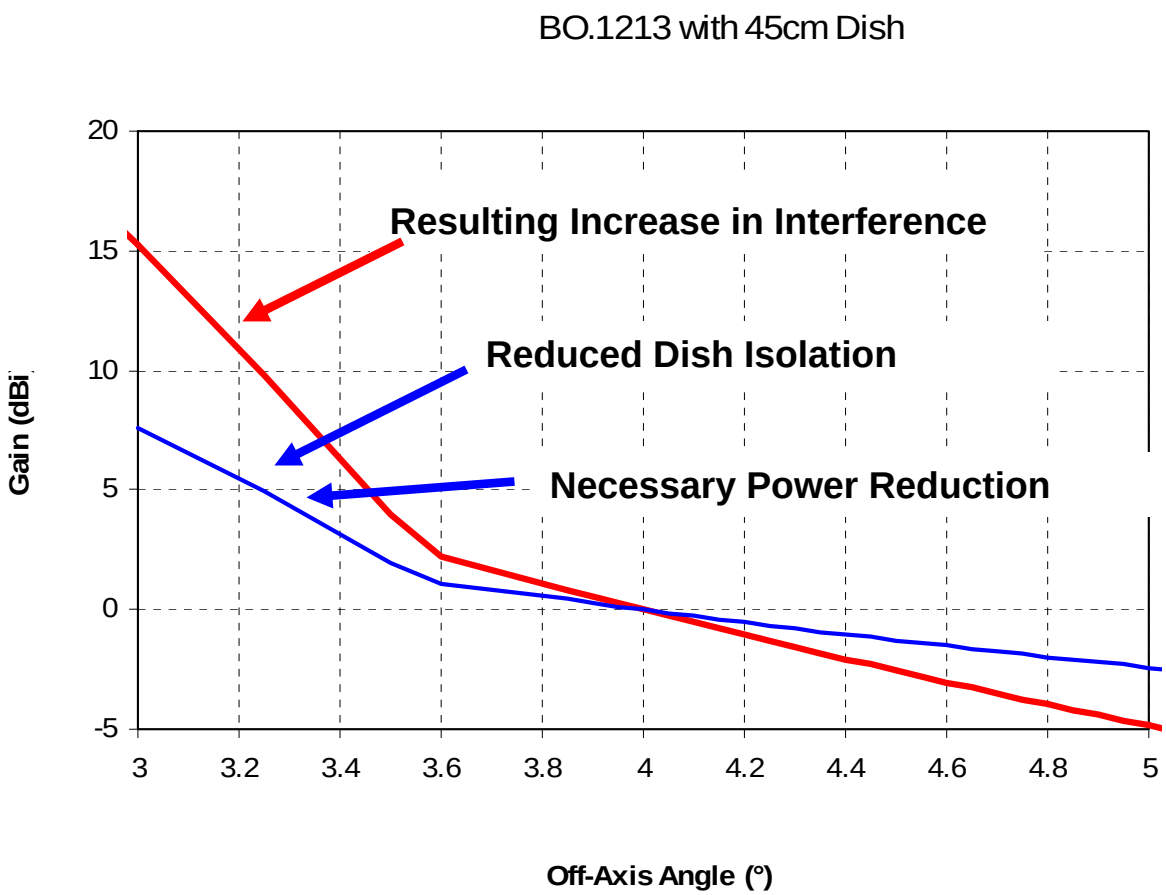
No single dish solution is possible for 111° at full power and interference protection.

dish NETWORK
Better TV for all.

Power Level Reductions Eviscerate Benefit of Orbital Offsets

- Offset necessary to permit single feed with 110° satellites is not practical due to power constraints.
- Offset under rules forces stark reduction in power and increase in adjacent interference rendering offset location unfit for use.
  - No greater interference than would be caused by operation at 4° location; and
  - Acceptance of any increased interference from adjacent RBW satellites.

Power Level and Interference Effects Eviscerate Benefit of Orbital Offsets



RBW operation less than 4° forecloses DBS-like video services from small dishes.

Sufficient Spectrum

- Existing rules delay deployment of services and reduce the chance that US operators will actually deploy in this band.
- Risk of partial slots undercuts potential viability of some orbital locations.
- If EchoStar were to receive only 1/2 or 1/3 of spectrum at an orbital location, economics of constructing a RBW satellite are difficult to justify.

Key Principles

- Band plan should recognize DBS synergies while facilitating new entry.
- Service should not require a 2-dish solution.
- Band plan should permit full power operations.